

No.

8100072



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME;

## Delta and Pine Land Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Deltapine 120'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 19th day of November in the year of our Lord one thousand nine hundred and eighty-one.

Attest:

*Lyman K. Case*  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture





## EXHIBIT A

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 120Origin and Breeding History

Deltapine 120 has been developed through pedigree selection from a cross of Deltapine 66 and 652-616-72. Deltapine 66 is a discontinued variety released by Delta and Pine Land Company, Memphis, Tennessee. 652-616-72 is an experimental strain developed by the afore named company.

F<sub>1</sub> seed of the 7120 cross was increased in Iguala, Mexico during the winter of 1971-72. F<sub>2</sub> plants were selected at Scott, Mississippi in the summer of 1972. Reselection continued through the F<sub>5</sub> generation (1973-75) at Casa Grande, Arizona.

Deltapine 120 has been evaluated for four years in replicated tests (1976, 1977, 1978 and 1979) with Deltapine 61 as the check. Deltapine 120 was tested with pedigree numbers 7120-26-32-46 and Deltapine 7120.

Deltapine 120 has proved to be uniform and genetically homogeneous.







Deltapine 120, cotton application # 8100072, has proved to be uniform, stabile, and without variants over the period of five years (1976-1980) in which it has been included in replicated tests. The replicated tests have been conducted in Arizona, California, and Mississippi.

RECEIVED  
AUG 11 1981



MISSISSIPPI  
STATE



RECEIVED  
AUG 17 1981



AMS, LPG&S DIV.  
PVPO



## EXHIBIT B

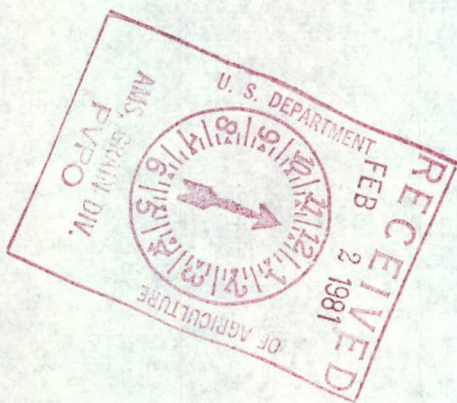
DELTA AND PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 120Novelty Statement

Deltapine 120 most nearly resembles Deltapine 61. Deltapine 120 is novel due to (1) its plant structure and (2) its agronomic properties as signified by data collected over three years (1977, 1978 and 1979) at Casa Grande, Arizona by Delta and Pine Land Company.

	Deltapine 120	Deltapine 61	Difference
1. <u>PLANT STRUCTURE (TABLE C-12)</u>	Cluster	Normal	
2. <u>DATA FROM TABLE B I (3YRS. TESTING)</u>			
Lint yield, Lb/Acre	1675	1585	+90
Percent of Check	109	103	+6
Lint Percent	35.6	33.8	+1.8
Strength T <sub>1</sub>	24.8	24.6	+0.2
Elongation E <sub>1</sub>	7.1	7.0	+0.1
2.5% Span Length, inches	1.08	1.12	-0.04
Length Uniformity Index	47.0	45.9	-1.1
Micronaire Index	5.0	5.1	-0.1
Smoothness of Leaf Index	7	7	none
Leafiness Index	1.2	2.5	+1.3
Plant Height Index	3.1	2.8	+0.3
String out Index	3.0	2.8	+0.2
<u>DATA FROM EXHIBIT C (2 YRS. TESTING)</u>			
Cm. Height	114.8	106.0	+8.8
Cm. to 1st Fruiting Branch	14.3	13.4	+0.9
Node to 1st Fruiting Branch	5.6	5.5	+0.1
Seed per Boll	28.3	29.8	-1.5
Diameter of Boll	3.3	3.3	none
Width of widest leaves at maturity	13.6	13.2	+0.4

Deltapine 120 compared with Deltapine 61 is novel for the following reasons based on differences expressed in Table B I, C5 and C16.





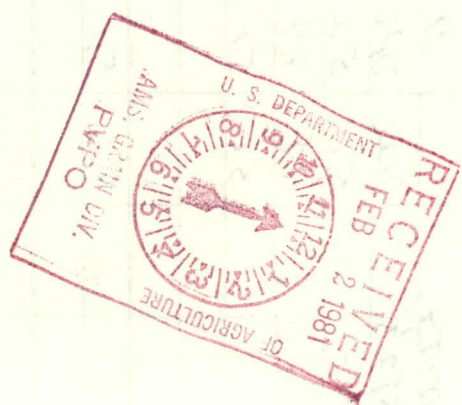


# Tests - Three Year AVE.

Heck (DP61)		Lint Percent				
DP80	ST-213	7120	DP61	DP70	DP80	ST-213
101	79	35.8	34.2	34.0	36.5	33.0
104	95	35.1	32.5	31.7	34.2	30.4
109	90	36.0	34.8	34.4	36.5	33.3
105	88	35.6	33.8	33.4	35.7	32.2
Action		2.5% Span				
DP80	ST-213	7120	DP61	DP70	DP80	ST-213
6.9	6.1	1.07	1.10	1.09	1.08	1.10
7.7	6.6	1.09	1.15	1.14	1.14	1.15
7.5	6.8	1.07	1.12	1.11	1.08	1.09
7.4	6.5	1.08	1.12	1.11	1.10	1.11
AIR		Smoothness				
DP80	ST-213	7120	DP61	DP70	DP80	ST-213
5.1	5.3	74	7	6	70	4
5.0	5.1	74	7	6	7	4
4.8	5.2	7	7	5	7	4
5.0	5.2	7	7	5.7	7	4

8100072







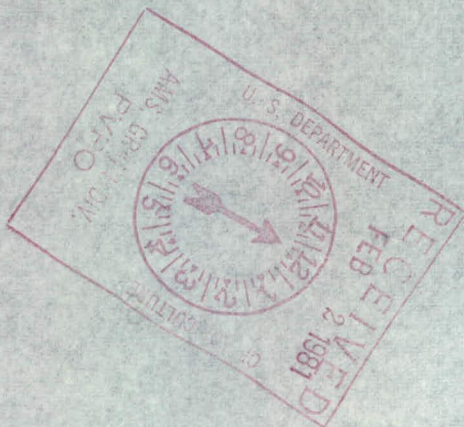
Plant Structure	Cluster
Lint Percentage	+1.8%
2.5% Span Length	-0.04 inches
Plant Height	+8.8 Cm.

These data are supported by test conducted by Delta and Pine Land Company and results generated by other stations (Exhibit D).



Plant Structure	Cluster
Line Percentage	41.8
Stem Length	40.04 inches
Plant Height	48.8 cm

These data are supported by test conducted by Delta and Pine Land Company and results generated by other stations (Exhibit 10)





## TESTS OTHER STATIONS

TABLE D I 1 - 1978. Regional Variety Test, Cotton Research Center. Phoenix, Arizona.

	Deltapine 120	Deltapine 61	Difference
Lint, Lbs/Acres	1728	1613	+115
Lint Percent	38.6	36.8	+1.8
2.5% Span, inches	1.06	1.12	-0.06
Micronaire	4.97	4.96	+0.01

From Tables D I 1a

TABLE D I 2 - 1978. Regional Variety Test, Yuma, Arizona.

	Deltapine 120	Deltapine 61	Difference
Lint, Lbs/Acres	1222	1076	+146
Lint Percent	40.3	38.6	+1.7
2.5% Span, inches	1.03	1.06	-0.03
Micronaire	4.77	4.99	-0.22

From Tables D I 2a



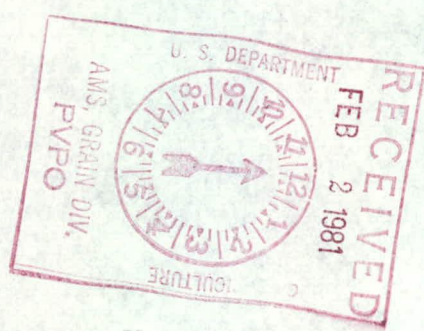




TABLE D I 3 - 1979. Strains Test, Conducted by the University of Arizona Cotton Research Center, Phoenix, Arizona.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	1842	1688	+164
Lint Percent	41.6	38.8	+2.8
2.5% Span, inches	1.06	1.13	-0.07
Uniformity Index	47	47	none
Micronaire	5.24	5.09	+0.15

From Table D I 3a

TABLE D I 4 - 1979. Short Staple Variety Trial, Conducted by the Pinal County Farm Advisor, Maricopa, Arizona.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	1622	1446	-146
Lint Percent	35.6	31.9	+3.7
2.5% Span, inches	1.11	1.14	-0.03
Uniformity Index	47	44	+3.0
Micronaire	5.31	5.25	+0.06

From Table D I 4a



NO. 100-100000  
BIOGRAPHICAL RECORD

100-100000  
BIOGRAPHICAL RECORD

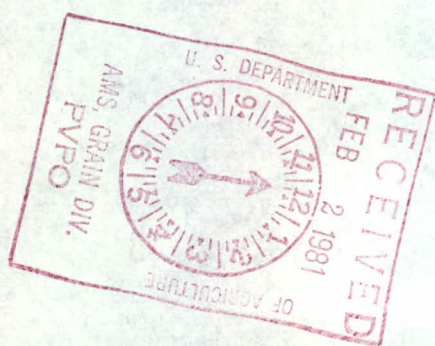




TABLE D I 5 - 1979. Short Staple Variety Trial, Conducted by the Pinal County Farm Advisor, Casa Grande, Arizona.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	1223	1252	-29
Lint Percent	36.5	33.9	+2.6
From Table D I 5a			

TABLE D I 6 - 1979. Strains Test, Conducted by the University of Arizona, Marana, Arizona.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	879	844	+35
Lint Percent	40.1	38.4	+1.7
2.5% Span, inches	1.08	1.10	-0.02
Uniformity Index	46	45	+1.0
Micronaire	4.52	4.71	-0.19

From Table D I 6a







TABLE D I 7 - 1978-1979. Combined Data From Five Tests, Conducted by Delta & Pine Land Company, Brawley, California.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	1860	1952	-92
Lint Percent	34.1	32.5	+1.6
Strength T <sub>1</sub>	24.1	24.1	none
2.5% Span, inches	1.06	1.09	-0.03
Uniformity Index	44.3	44.5	-0.2
Micronaire	4.2	4.2	none

1. Data sheets not included in Exhibit D. Will be supplied upon request.

TABLE D II 1 - 1978. CCVTC Screening Test, Average of three locations (Mari-copa, Woodville and Modera) in the San Joaquin Valley, California.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	576	665	-89
2.5 Span, inches	1.10	1.16	-0.06
Uniformity Index	44.5	43.2	+1.3
Strength T <sub>1</sub>	2.05	20.5	none
Elongation E <sub>1</sub>	8.0	8.6	-0.6
Micronaire	3.63	3.61	+0.02
Verticillium Wilt Rate	43	54	-11
Plant Height, cm	132	122	10

From Tables D II 1a, D II 1b and D II 1c





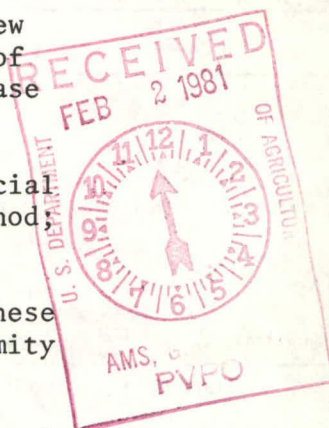


## INSTRUCTIONS

**GENERAL:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.





# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY 7120-26-32-46		1b. VARIETY NAME DELTAPINE 120		FOR OFFICIAL USE ONLY PV NUMBER 8100072	
2. KIND NAME COTTON		3. GENUS AND SPECIES NAME GOSSYPIMUM HIRSUTUM		FILING DATE 3/11/81	TIME 10:00 <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">A.M. P.M.</span>
4. FAMILY NAME (BOTANICAL) MALVACEAE		5. DATE OF DETERMINATION OCTOBER 15, 1977		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 3/11/81 9/16/81
6. NAME OF APPLICANT(S) DELTA AND PINE LAND CO.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) POST OFFICE BOX 77 MEMPHIS, TENNESSEE 38101		8. TELEPHONE AREA CODE AND NUMBER (602) 836-2739	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) CORPORATION		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION DELAWARE		11. DATE OF INCORPORATION 10/19/78	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: MR. ELMER L. GILBERT POST OFFICE BOX 1006 CASA GRANDE, ARIZONA 85222					

## 13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

1/23/81  
(DATE)

Elmer L. Gilbert  
(SIGNATURE OF APPLICANT)

1/23/81  
(DATE)

Shirley B. Bland  
(SIGNATURE OF APPLICANT)



## 15. BOLLS:

☒ Locules: 1 = 3-4  
 2 = 4-5

☒ Pitted: 1 = NONE  
 2 = FINELY  
 3 = COARSELY

☒ Type: 1 = STORMPROOF (WESTBURN 70)  
 2 = STORM RESISTANT (LANKART 57)  
 3 = OPEN (DELTAPINE 16)

☒ Shape: 1 = LENGTH < WIDTH  
 2 = LENGTH = WIDTH  
 3 = LENGTH > WIDTH

TABLE C15a NO. SEEDS PER BOLL ☒ 2 ☒ 8

TABLE B1 LINT PERCENT ☒ 3 ☒ 6 ☒ 0

TABLE C15b MM. DIAMETER ☒ 3 ☒ 3

GRAMS SEED COTTON PER BOLL ☒ 4 ☒ 3 ☒ 5

Breadth: 1 = BROADER AT BASE  
 2 = BROADER AT MIDDLE

## 16. BRACTEOLAS:

☐ Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH

☐ Teeth: 1 = FINE 2 = COURSE

☒ Teeth: 1 = 3-4 2 = 5-7 3 = 8-10  
 4 = OTHER (Specify)

## 17. YIELD: Compared to—

☐ PERCENT LESS THAN .....

☒ TABLE B1 PERCENT MORE THAN .....

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213  
 4 = PAYMASTER 111 5 = ACALA 1517-70  
 6 = ACALA SJ-1 7 = LANKART 57

## 18. FIBER LENGTH (Complete one or more of the following and give the means):

☐ SPAN LENGTH 50%

☒ 1 ☒ 0 ☒ 8 SPAN LENGTH 2.5%

☐ MEAN LENGTH

☐ STAPLE LENGTH 32nd INCHES

☐ U.H.M. LENGTH

☐ UNIFORMITY RATIO (MEAN/U.H.M.)

☒ 4 ☒ 7 UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

## 19. FIBER STRENGTH AND ELONGATION:

☐ 1,000 P.S.I.

☒ 7 ☒ 1 ELONGATION E<sub>1</sub>

☒ 5 ☒ 0 ☒ 0 MICRONAIRE READING

☐ YARN STRENGTH (Give test method)

☒ 2 ☒ 4 ☒ 8 STILOMETER T<sub>1</sub>

## 20. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☒ VERTICILLIUM WILT

☐ FUSARIUM WILT

☐ ROOT KNOT NEMATODE

☐ BACTERIAL BLIGHT (Race 1)

☐ BACTERIAL BLIGHT (Race 2)

☐ ASCOCHYTA BLIGHT

☐ PHYMATOTRICHUM ROOT ROT

☐ RHIZOCTONIA

☐ ANTHRACNOSE

☐ RUST

☐ OTHER (Specify)

## 21. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ BOLL WEEVIL

☐ APHID

☐ FLEAHOPPER

☐ LEAFWORM

☐ FALL ARMYWORM

☐ GRASSHOPPER

☐ LYGUS

☐ PINK BOLLWORM

☐ STINKBUG

☐ THRIP

☐ CUTWORM

☐ SPIDERMITES

☐ OTHER (Specify)

REFERENCES: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.
- (2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.







TABLE D II 2 - 1979. Main Variety Test, Conducted by Delta & Pine Land Company, Tulare, California.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	911	957	-46
Lint Percent	32.2	31.6	+0.6
Strength T <sub>1</sub>	21.8	23.4	-1.6
2.5% Span, inches	1.05	1.13	-0.08
Uniformity Index	79	78	+1
Micronaire	3.8	3.8	none
Verticillium Wilt Rate	30	45	-15

1. Data sheets not included in Exhibit D. Will be supplied upon request.

TABLE D II 3 - 1979. Main Variety Test, Conducted by Delta & Pine Land Company, Wasco, California.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	1503	1357	+146
Lint Percent	36.0	35.4	+0.6
Strength T <sub>1</sub>	23.0	22.9	+0.1
2.5% Span, inches	1.04	1.12	-0.08
Uniformity Index	80	81	-1.0
Micronaire	5.0	4.9	+0.1

1. Data sheets not included in Exhibit D. Will be supplied upon request.



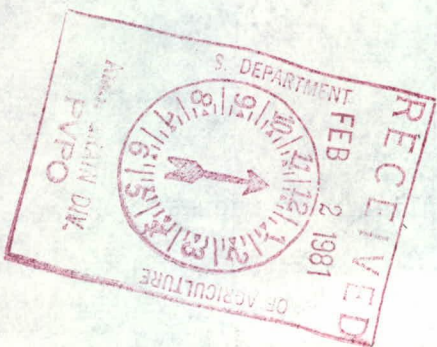




TABLE D III 1 - 1979. Main Variety Test, Conducted by Delta & Pine Land Company, Scott, Mississippi.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	1236	1250	-14
Lint Percent	39.4	38.3	+1.1
Strength T <sub>1</sub>	23.3	24.0	-0.7
2.5% Span, inches	1.07	1.13	-0.06
Uniformity Index	45.7	4.5	+0.7
Micronaire	4.0	4.2	-0.2

1. Data sheets not included in Exhibit D. Will be supplied upon request.

TABLE D III 2 - 1979. South Delta Variety Test, Conducted by Delta & Pine Land Company.

	Deltapine 120	Deltapine 61	Difference
Lint, Lb/Acre	679	590	+89
Lint Percent	38.7	34.4	+4.3
Strength T <sub>1</sub>	22.9	23.6	-0.7
2.5% Span, inches	1.09	1.15	-0.06
Uniformity Index	45.5	43.5	+2
Micronaire	3.9	3.7	+0.2

1. Data sheets not included in Exhibit D. Will be supplied upon request.



